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State of Utah
DEPARTMENT OF NATURAL RESOURCES
Division of Oil, Gas & Mining

MICHAEL R. STYLER
Executive Director
JOHN R. BAZA
Division Director

February 25, 2008

Bob Roth
Western Rock Products
820 North 1080 East
St. George, Utah 84770

Subject: Third Review Notice of Intention (NOI) to Commence Large Mining Operations, Western Rock Products, Nichols Pit, M/021/039, Task ID# 2098, Iron County, Utah

Dear Mr. Roth:

The Division has completed a review of the Nichols Pit NOI received November 14, 2008. The Division has determined that this submittal is incomplete and did not adequately address the Division's review comments from the second review. We have identified under our past comments where we feel the plan is deficient.

We are very concerned about the quality of the NOI submitted and that the mine is operating without an approved permit. Unless substantial progress is made in the next submittal the Division will consider enforcement action. In order to expedite the review process and to ensure Western Rock Products meets regulatory requirements, the following actions are suggested and/or required:

- A meeting with the Division and those working on the NOI is *suggested* to discuss pertinent issues such as: maps, hydrology, erosion control, and slope concerns to name a few.
- Consider the assistance of an outside source (consultant) to complete the plan. The Division suggests including the outside source in Division meetings.
- An additional reclamation surety amount of $254,830.00 *must* be submitted by March 14, 2008. This amount is considered an *interim* amount, which may be adjusted upon final approval. Please contact surety coordinator, Mr. Jed Pearson, 801-538-5382 to obtain information on how to submit the surety and the documents required, including a reclamation contract.

Please address only those items requested in the attached technical review at this time, unless there are new procedures, practices, and/or conditions that will affect the operation and reclamation plan. In addition, when your response is submitted, please submit a hard copy and an electronic version.

1594 West North Temple, Suite 1210, PO Box 145801, Salt Lake City, UT 84114-5801
telephone (801) 538-5340 • facsimile (801) 359-3940 • TTY (801) 538-7458 • *www.ogm.utah.gov*

If you have any questions in this regard please contact me at 801-538-5258, Paul Baker 538-5261, Beth Ericksen 538-5318 , or Tom Munson 538-5321. If you wish to discuss this review, please contact us at your earliest convenience. Thank you for your cooperation in completing this permitting action.

Sincerely,

Susan M. White

Susan M. White
Mining Program Coordinator
Minerals Regulatory Program

SMW:tm:pb
cc: John W. Parson, Staker Parson Companies, 2350 South 1900 West Ogden, UT 84401
Attachment: Review, Form MR-REV-att
P:\GROUPS\MINERALS\WP\M021-Iron\M0210039-NicholesPit\final\LMO-3rd -REVIEW-02212008.doc

THIRD REVIEW OF NOTICE OF INTENTION TO COMMENCE LARGE MINING OPERATIONS

Western Rock Products
Nichols Pit
M0210039
February 21, 2008

R647-4-105 - Maps, Drawings & Photographs

105.1 Topographic base map, boundaries, pre-act disturbance

The permit boundary is not shown on all your maps. The only map that shows disturbance boundaries is the Disturbed Area Map, #1. On Map #1 there is a historic disturbance boundary, there is a present disturbance boundary, and there is a 5-year plan boundary. Please include these boundaries on Site Map #1, Facilities Map #2, and final grading plan map #3. All maps must have legends and descriptions. In these legends you should provide acreages associated with your boundary labels, so it's clear what you are mining and disturbing and what you are bonding. Therefore, if your 5 year plan boundary is your proposed bonded area, you need to identify this on your map and show what the acreage is. (TM)

We are only interested in the area to be bonded for reclamation related to the disturbance you will create or impact. Since you show the entire 130.2 acres as being disturbed, then you need to bond for this acreage.

Please also show product piles, soil piles, waste dumps, and crusher fines storage areas and label them as such. There is a label on Map # 2 and it states "fines to be disturbed during reclamation" but this area is outside your permitted, disturbed area and property boundary. Please clarify what this means. (TM)

Fines area not addressed or bonded.

105.2 Surface facilities map

The surface facility map titled, "Facilities Map #2" identifies existing crusher equipment to be removed, however, if applicable, the following shall be provided: proposed surface facilities (i.e. buildings, mining/processing equipment, roads, utilities, power lines, proposed drainage control structures, location of topsoil storage areas, tailings or processed waste facilities, disposal areas for overburden, solid and liquid wastes and wastewater discharge treatment and containment facilities). If there are no proposed surface facilities, an explanation providing the non-applicability must be submitted. (BE)

Please provide some text to address this comment

105.3 Additional Maps

A reclamation treatments map should be furnished. This map should show areas of the site to receive various reclamation treatments shaded, crosshatched, or color-coded to identify which reclamation treatments will be applied. Reclamation treatments may include ripping, regrading,

replacing soil, mulching, broadcast seeding, drill seeding and hydroseeding. (TM)
This was not addressed.

A reclamation map should be provided that shows information such as (but not limited to): berms, barriers, drainages, slopes, highwalls, roads, structures and equipment. (BE)
This was not addressed except drainages are shown on Map 5. Equipment is addressed under facilities map 4.

The map identified in the NOI, as "Attached Map" and Attachment B, but was not included. Please provide. This map shall include a border outlining the area to be reclaimed after mining, the number of acres disturbed, and the number of acres proposed for reclamation. The areas that are requested as part of a variance must be included. (BE)
Please provide a different boundary designation on your maps as Bonded Area and what you currently call 'boundary of graded area' needs to be explained or that designation changed on the maps and clearly explained in the plan, since the plan does not reflect the 130.2 acres Furthermore, please ensure acreages are labeled on the maps in the legend. It appears they are in most cases, please double check.

Please provide explanation per 105.3 (d) that has a reference of N/A. An explanation and identification on a map must be provided regarding highwalls and slopes. (BE)
Not addressed.

Please provide an operations map that identifies the following: entrance road, locked gate location, berm location, location of trash and scrap metal for hauling, haul road from the trash and scrap metal site to highway, identify materials storage location(s). Please include stockpile areas, property boundary, 5-year plan boundary and other map basics. (BE)
Portions of this request have been submitted on map 4. Show: berm locations, locked gate location, trash and scrap metal location, materials storage locations. You may have to submit another map.

R647-4-106 - Operation Plan

106.2 Type of operations conducted, mining method, processing etc.
All materials not used in the operation are to be stored for future reclamation.
Please show on the surface facilities map where this material will be stored. (TM)
Is this shown as the fines pile, because no other designation was seen?

Please provide a narrative description regarding the location of the crushing and screening facility. Show these on the operations map. (BE)
The Location is shown on Map 4 but no narrative was provided.

106.3 Estimated acreages disturbed, reclaimed, annually.
This is not clear on the maps and needs to be accurately shown and labeled to reflect the plan. (TM)
Not complete as the designations on the maps are unclear and the plan does not clearly explain the bonded area.

Please provide a narrative description regarding the details ore/product stockpiles. The map titled, "Facilities Map #2" identifies three stockpiles. Please quantity each one and label them 1, 2, 3. Show access routes to the stockpiles. (BE)
Not completed

Please provide a narrative description regarding the plan for placement of the crusher fines. Please quantify the area that is identified in the 5-year plan. The area shown within the 5-year boundary on the map titled, "Facilities Map #2", does not appear to accommodate the annual volume. Also identify this fines acreage within the 5-year plan boundary on the operations map. (BE)
This has not been adequately addressed

106.4 Nature of materials mined, waste and estimated tonnages

This portion of the application indicates that there is 15 acres of mining and an area where crusher fines are stored. The area where the crusher fines are located needs to be shown on the operations map. All areas affected by this operation need to be included in the application. (TM)
This has not been adequately addressed in the text or on the maps. It is still unclear what the bonded area is.

The plan indicates that 100,000 cu yds of tailings or reject material will be created annually. For the duration of the first five-year plan (or however many years you propose), the area to be impacted by this material will be much greater than the area presently shown. The permittee should allow for sufficient area to store this material and include in the plan the final disposition of this stockpile. (TM)
No mention of this in the text or on the map except for the fines pile shown on Map 4 which has not been included as part of the disturbance.

106.6 Plan for protecting & redepositing soils

The plan identifies an estimated 200,000 cu. yds. of substitute soil material available and that it will be respread at a 12- inch depth. With the 81.7 acres of disturbance, this amount of material will provide a 18- inch cover. The soil analysis provided shows a very low organic matter content. To remedy this problem, consider amending the material with 5 tons/acre of composted manure or biosolids. (LK)
Not mentioned in the text.

106.7 Existing vegetation - species and amount

The plan refers to the soil survey for vegetation information. The site location for the potential vegetation community for the soil type is near Parowan, Utah (ca. 30 miles away). Aside from listing species that potentially exist on the soil types at the site, the soil survey does not provide the percent ground cover of living vegetation. As previously requested, please provide the results of a vegetation survey that, at a minimum, provides the percent vegetation ground cover and the species that exist of the plant communities adjacent to the site that are presumed to have existed before mining. (LK)
The revegetation plan needs to be made clear. It appears that 24 inches of fines (plant growth medium) will be replaced using truck and loaders. The material will be amended (no discussion as to the type(s) or rate(s) of amendments. Consider using 5-10 ton per acre of composted manure or

biosolids to improve the organic content of the plant growth medium) and seeded with 33.77 pounds per acre of the seed mix provided by SWCA. (Discussion in the SWCA letter refers to using 2000-lbs per acre of wood fiber mulch and a tackifier – will this be used?). The SWCA seed mix is not acceptable, in that it contains weedy or undesirable species (i.e. broom snakeweed), and is unlikely that it would establish a diverse, permanent vegetation cover capable of supporting the intended post mining land use. Will the same revegetation plan be used over the entire site? If not provide a revegetation plan each area and show on a map where each area is. The attached seed mix would be acceptable to the Division for reclamation of this site. If acceptable to Western Rock Products, please include this mix in your plan. (lk)

R647-4-107 - Operation Practices

107.1 Public Safety and Welfare

Please identify the berm size and location on the operations map. (BE)
Not shown

107.2 Drainages to minimize damage.

Please describe how storm water drainage and erosion will be controlled coming from offsite onto the long reclaimed slopes at the edges of the pit. (TM)
This is now shown on Map 5. It appears that the drainage will be routed across the slopes in final reclamation. This is not stable in terms of the way the final configuration of the slopes to be left. It would appear to be more appropriate to let the runoff enter the pit directly down the slopes with energy dissipation as it travels down the benches and at the base and provide more a blending of these drainage points into the pit.

107.4 Deleterious material safety stored or removed

The plan states no deleterious material will be left on the site after crushing operations have ceased for the year. The plan needs to include detail on how these materials will be stored at the site during the crushing operation. (TM)
Not addressed

107.5 Concurrent Reclamation

Please identify and provide narrative regarding the areas that will be disturbed but are not routinely used keeping them safe and environmentally stable. (BE)
Not addressed

R647-4-109 - Impact Assessment

109.2 Impacts to threatened & endangered wildlife/habitat

The referenced letter from Wildlife Resources in not in this submittal (it appears that this submittal was to be a 'stand alone' plan – not amending the previous submittal with replacement pages, maps, etc. If this is indeed the case, it should have been made clear with a cover letter. If this submittal is only addressing the comments of our last review, then make sure that the various documents referred to are compiled in the final version). (lk)

109.3 Impacts on existing soils resources

See comment under 109.2, substituting wildlife for soils data. (lk)

R647-4-110 - Reclamation Plan

110.2 Roads, highwalls, slopes, drainages, pits, etc., reclaimed

The plan is unclear on the details for final highwall configuration. The Division realizes that the remaining highwalls surrounding the pit floor will be left at 45 degrees meeting regulatory requirements. Cross sections show a straight 45-degree slope. Accommodations for off-site drainage draining into the pit will still need to be discussed. Please provide what kind of reclamation treatment the highwalls will receive like ripping, gouging, shaping, reestablishing micro-drainages and how they will be seeded etc. The Division suggests an irregular final slope length and width to more closely blend with existing topography. (TM)

Not addressed

110.3 Facilities to be left

Provide a narrative description about any surface facilities to be left as part of the post mining land use. Surface facilities include roads, pads, ponds pits etc. (BE)

Not addressed

110.5 Revegetation planting program

Please provide a revegetation plan for the disturbed areas. If different treatments will be used on selected areas, then these areas (and treatments) need to be identified on a reclamation map. At a minimum, the revegetation plan needs to define topsoil (plant growth material) replacement, including depth(s) to be replaced (the 200,000 cu. yds. of material will provide approximately 18-inches of material); amendments to be added (as needed - based on current soil analysis of plant growth materials. - Based on the soil analysis provided please plan to amend the soil with 5 ton/acre of composted manure or biosolids to remedy the low organic matter content. Fertilizer recommendations are based on cropland needs, which is excessive for re-establishing the native vegetation. The need for commercial fertilizer to establish the native vegetation is unlikely.); seedbed preparation (ripping to the 24- inch depth is acceptable and leaving area rough for water collection), a list of species to be seeded, including rate of application as lbs/acre of pure live seed; timing (late fall is generally best time for seeding); and weed control measures (if needed). Species selection for revegetation should based on their need/utility for the post mining land use. When possible, the use of native species is encouraged (refer to the attached seed mix as an example of what is needed). (LK)

R647-4-111 - Reclamation Practices

111.2 Reclamation of natural channels

It appears from your final Grading plan that several emphemeral drainages will drain into the pit area. Please explain the way these drainages will be reclaimed and allowed to cascade down the remaining highwalls during severe thunderstorms. Will any protection be implemented to prevent unraveling of the highwalls in these areas under severe runoff events? (TM)

This is now shown on Map 5. It appears that the drainage will be routed across the slopes in final reclamation. This is not stable in terms of the way the final configuration of the slopes to be left. It would appear to be more appropriate to let the runoff enter the pit directly down the slopes with energy dissipation as it travels down the benches and at the base and provide more a blending of these drainage points into the pit.

111.3 Erosion Control

Provide sediment control plan, which includes site characteristics (i.e. acreage, drainage patterns, rainfall data). Identify the erosion control plan and how it fits with the construction phases of reclamation. (BE)

Please provide narrative.

111.4 Deleterious Materials safely removed, isolated or neutralized

Describe deleterious material plan. Including but not limited to handling the materials and their control. Identify a temporary landfill area if one is to be designated. (BE)

There is some information about deleterious material management, however, more is required. Please explain how materials are stored and managed. Indicate how the fuel area is contained. How is the fuel stored? Or is it delivered?

111.6 Slopes regraded to stable configuration

Reclamation map should identify slopes and regrading associated with waste piles, and spoil piles. Provide a regrading plan that incorporates soil characteristics. Include information about slope shape. Identify equipment to be used. (BE)

Enough information has been submitted on map 5. Please provide equipment list, or clarify if the equipment used is shown in 'calculation for bonding'

111.7 Highwalls reclaimed or stabilized

Describe how highwalls will be reclaimed and stabilized. Show location of highwalls on reclamation map. (BE)

Plan indicates there are no highwalls. Please provide berm dimensions (This comment is located here because it is in the operator's submittal in this section.)

111.8 All roads and pads reclaimed

Show on reclamation map all roads and pads that will be reclaimed. Provide narrative on how they will be reclaimed including proposed equipment to be used.(BE)

This comment is related to the operator comment in 110.2. Stating there is a letter from the landowner is not sufficient. Describe the information requested.

111.9 Dams and impoundments reclaimed and self-draining

Show on reclamation map any dams and impoundments. Provide narrative regarding reclamation plan and stabilization. (BE)

There are short statements in the submittal, but lacks important information. Dimensions must be provided and an explanation of how 45° slopes will be achieved.

111.10 Trenches and small pits reclaimed

Describe how trenches and pits will be reclaimed and estimate volume of these areas. (BE)

Deficient. If there aren't any trenches and pits, please indicate.

111.11 Structures and equipment buried or removed.

The map titled, "Facilities Map #2" shows crusher equipment to be removed. Provide narrative plan regarding its removal. (BE)

Again, explain equipment required for removal.

R647-4-113 – Surety

Provide demolition activities and describe labor, materials and equipments cost. (BE)

Provide information about equipment used in reclamation. (BE)

Provide narrative about roadway lengths and method used for reclamation. Include type of equipment and labor. (BE)

Provide a mobilization/demobilization cost for all equipment to be used during reclamation. (BE)

Estimates about scope of work including labor, materials, and equipment costs. (BE)

If there are any landfill costs, identify them and estimated quantity. (BE)

Provide information about land grading including areas to be graded. (BE)

Any material re-location, provide estimated quantity and distance traveled. (BE)

More information may be required once the reclamation map and information is received. (BE)

The submitted estimate does not reference sources of costs. Please ensure that information is provided. Some comments above have not been addressed.

Attachment: Seedmix

Revegetation Species List

Common Name	Species Name	*Rate lbs/ac (PLS)
Intermediate wheatgrass	*Agropyron intermedium*	1.0
Thickspike wheatgrass	*Agropyron trachycaulum*	2.0
Bluebunch wheatgrass	*Agropyron spicatum*	2.0
Indian ricegrass	*Oryzopsis hymenoides*	2.0
Sandberg bluegrass	*Poa Secunda*	0.2
Palmer penstemon	*Penstemon palmeri*	0.5
Small burnet	*Sanguisorba minor*	1.0
Black sagebrush	*Artemisia nova*	0.2
Wyoming big sagebrush	*Artemisia tridentata wyomingensis*	0.1
Bitterbrush	*Purshia tridentata*	1.0
Bitterbrush	*Purshia tridentata*	1.0
Forage kochia	*Kochia prostrata*	0.5
	Total	11.5 lbs/ac

*Recommended broadcast seeding rate.